

Claims:

1. An attaching device for gradually attaching a gutter-sectional strip having an optional length to an edge of a plate-like portion of an object, the gutter-sectional strip including a pair of arm pieces opposing each other and a back length connecting the arm pieces with each other, said device comprising:
- 5 a) a body having a passage for the gutter-sectional strip;
- b) a pressing groove provided in said body for receiving the gutter-sectional strip with the back length thereof being firstly received;
- 10 c) a support surface provided in said body and substantially opposing and cooperating with said pressing groove to hold therebetween the object having the plate-like portion; and
- d) a strip guide provided in said passage for guiding the gutter-sectional strip toward said pressing groove while spreading out the arm pieces of the gutter-sectional strip as the gutter-sectional strip is fed along said passage.
- 15
2. The attaching device as defined in claim 1, wherein at least one of said pressing groove and said support surface is structured so as to rotate as the object and the gutter-sectional strip pass by therebetween.
- 20
3. The attaching device as defined in claim 1, wherein at least one of said pressing groove and said support surface are structured so as not to rotate as the object and the gutter-sectional strip pass by therebetween.
- 25
4. The attaching device as defined in claim 1, wherein said pressing groove and said support surface are both structured so as to rotate as the object and the gutter-sectional strip pass by therebetween.
- 30
5. The attaching device as defined in claim 1, wherein said device further comprises at least one fitting roller provided in said body to be rotatable about an axis extending substantially perpendicular to a feeding direction of the gutter-sectional strip

along said passage, with said pressing groove being defined by a portion of said at least one fitting roller.

5 6. The attaching device as defined in claim 5, wherein said pressing groove extends annularly along an outer circumferential surface of said at least one fitting roller.

10 7. The attaching device as defined in claim 5 or 6, wherein said strip guide is structured to guide the gutter-sectional strip toward said at least one fitting roller while spreading out the arm pieces of the gutter-sectional strip as the gutter-sectional strip is fed along said passage.

15 8. The attaching device as defined in any one of claims 5 to 7, wherein said device further comprises at least one support roller provided so as to be rotatable in said body, with at least part or all of said support surface being defined by an outer circumferential surface of said at least one support roller.

20 9. The attaching device as defined in claim 8, wherein said outer circumferential surface of said at least one support roller substantially opposes and cooperates with said pressing groove to hold therebetween the object having the plate-like portion.

25 10. The attaching device as defined in claim 5, wherein said pressing groove extends annularly along an outer circumferential surface of said at least one fitting roller, said device further comprises at least one support roller provided so as to be rotatable in said body, with at least part or all of said support surface being defined by an outer circumferential surface of said at least one support roller, and said outer circumferential surface of said at least one support roller substantially opposes said outer circumferential surface of said at least one fitting roller and cooperates with said
30 at least one fitting roller to hold therebetween the object having the plate-like portion.

11. The attaching device as defined in any one of claims 1 to 3, wherein said pressing groove is stationary and has a relatively low coefficient of friction surface to slide along the gutter-section strip.

5 12. The attaching device as defined in any one of claims 1 to 3 and 5 to 7, wherein said support surface is stationary and has a relatively low coefficient of friction to slide along the object.

10 13. The attaching device as defined in any one of claims 5 to 10, wherein said fitting roller further includes a centering channel formed in said pressing groove, for receiving the edge of the plate-like portion of the object.

15 14. The attaching device as defined in any one of claims 8 to 10, further comprising an edge guide provided in said body and disposed upstream of said fitting roller and said support roller as seen in a direction of relative motion of the plate-like portion during a strip attaching operation, the edge guide including an engaging portion engageable with the edge of the plate-like portion for guiding said body along the edge of the plate-like portion during the strip attaching operation.

20 15. The attaching device as defined in claim 14, wherein said edge guide includes a guide roller provided to be rotatable in said body.

25 16. The attaching device as defined in any one of claims 1 to 15, wherein said pressing groove and said support surface are movable toward and away from each other.

30 17. The attaching device as defined in any one of claims 8 to 10, 14 and 15, wherein said fitting roller and said support roller are movable toward and away from each other.

18. The attaching device as defined in any one of claims 1 to 17, further comprising a biasing member for elastically biasing said pressing groove and said support surface toward each other.

5 19. The attaching device as defined in any one of claims 8 to 10, 14, 15 and 17, further comprising a biasing member for elastically biasing said fitting roller and said support roller toward each other.

10 20. The attaching device as defined in any one of claims 1 to 19, wherein said pressing groove and said support surface are relatively pivotable to change their relative angular positional relationship.

15 21. The attaching device as defined in any one of claims 8 to 10, 14, 15, 17 and 19, wherein said fitting roller and said support roller are relatively pivotable to change a relative angular positional relationship between respective rotary axes.